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MidTerm Overall Evaluation Report

PROPOSAL: 1999000252

TITLE: Tele-Ergonomics Assessment Methodologies Study

1. ACCOMPLISHMENTS:

1. Accomplishments. a. Staffing. Staffing arrangements to cover the project support, data collection, analysis and reporting have been completed. b. Installation points of contact have been identified and have committed themselves to supporting the project. The POCs are familiar with the protocol and are aware of their roles in the coordination and data collection process. The personnel sections at each of the bases have been contacted for information concerning units with the high risk MOSs, which they have provided. c. The respective MOS Center and Schools for each of the target MOSs have been contacted and have provided a complete task list for the MOS and the physical demand ratings for each of the tasks. The potential high risk task list has been prepared for each MOS and the focus group process has been finalized. The top five high risk tasks will be identified using a modified Delphi technique over the Internet. The focus group participants include instructions from the Center and Schools and target installation enlisted soldiers. d. The protocol has been submitted to both the MRMC and WRAMC IRBs. WRAMC has approved the protocol and we are awaiting final MRMC approval. Gaining IRB approval has been a significant problem (see discussion in the Problems/Issues section). e. A briefing for the installation POCs and unit staff was conducted at Fort Lee and is scheduled for Fort Drum and Fort Eustis. This briefing was requested by the base POCs to ensure that the installation command group, the preventive medicine/safety staff and the target MOS units were fully informed about the project. f. A statement of support from the Commander, Fort Lee has been received. These statements are required by the WRAMC IRB prior to the data collection phase. g. All of the assessment tools have been collected and the technician data collection packet and instructions has been developed and reviewed by a panel of expert ergonomists. This packet and the data collection process was field tested with 91S technicians assigned to the TAML, Aberdeen Proving Ground, Maryland. The field test was designed to ensure the instructions were understandable, the tools were usable and the data collection process was realistic.

2. PROBLEMS:

2. Problems. The most significant problem has been with IRB approval. This minimal risk proposal was submitted to MRMC IRB for approval as CHPPM does not have an IRB. We have used the MRMC IRB as our primary IRB in the past and I had assumed that the MRMC IRB approval was all that would be required; however, after the proposal had been reviewed, corrected and re-submitted, I was informed that the proposal would need to be submitted to each of the IRBs for the target bases. Since time was a concern, it was decided to re-target bases under one IRB rather than submit the proposal to four different IRBs. The target bases were changed to Fort Drum, Fort Eustis, Fort Knox, Fort Lee and Fort Bragg. All of these bases fall under the WRAMC IRB. The proposal has received WRAMC IRB approval and has been sent for final MRMC approval. Unfortunately, this time delay could have been avoided if I had realized that the MRMC approval alone would not suffice. The WRAMC IRB approval stipulates that statements from the installation commanders approving and supporting the project be submitted before the data collection starts. Fort Lee has submitted this statement and the POCs at the other installations are conducting briefings and staffing information papers to get these statements. We anticipate the final approval from MRMC within the next week.

3. LIFE-CYCLE:

3. Plans. a. We will complete the installation-requested Command and POC/target unit briefings by the end of October. In addition to ensuring the installation staff is fully informed and committed to the project, these briefings will also facilitate the installation Commander's statement of support for the WRAMC IRB. b. We will complete the high-risk MOS unit targeting and all scheduling arrangements by the end of October. We have started the data collection scheduling at the bases and will complete all of the data

collection by the end of December. c. We will complete the data analysis by the end of January. This data analysis will answer the following questions: 1. Is the tele-ergonomics method accurate? Specifically, how much agreement is there between the measurements taken by local technicians and expert ergonomists and how much agreement is there between the on-site and off-site expert ergonomists' evaluations and assessments? 2. Is the tele-ergonomics method feasible? Specifically, can the local technicians understand and use the tools and instruction packet? How much technician time does the method require? Is additional technician training required? Finally, how usable is this method in the variety of military environments: garrison, field and deployment. 3. Which assessment tools yield the most accurate results, are the easiest and fastest to use and are the most feasible in the given environments? Specifically, we want to know how well the tools compare among themselves and with the Borg scale, which has been shown to be a fairly good injury prediction tool. d. We will complete the final draft report by the end of February and allow 2 weeks for the review and revision of the document. e. Following the completion of the final report, we plan the following: 1. Installation Command briefings on the final project results, the application of the findings to practice and the value of the results for the local Ergonomics Program. 2. Revision and packaging of the tele-ergonomics methodology and tools. This package will be distributed to the Ergonomics Program POCs at all of the Army installations, depots and activities world-wide. The package will also be presented to the DOD Ergonomics Working Group for evaluation and consideration of DOD-wide distribution. 3. Specific identification of training requirements for 91S technicians and other local ergonomics personnel. The training requirements and subsequent training program will be submitted for incorporation into the 91S School and 91S continuing education initiatives and will be included in the Army 40-hour Applied Ergonomics Course. f. We anticipate no problems in meeting the P8 Telemedicine Program suspense for the final report.

4. DELIVERABLES:

4. Deliverables. The primary deliverable is the final tele-ergonomics methodology and assessment tools package. This package will address both prevention and the management of soldier/worker return to work. Return-to-work assessment, planning and accommodation are critical pieces of clinical management of injuries as these elements reduce lost work time / profile periods as well as reduce or prevent re-injury. Both prevention and return-to-work impact on health care system utilization by reducing the occurrence and severity of injuries. The success of the tele-ergonomics methodology is primarily evaluated by process measures, including the accuracy and feasibility of the methodology; decreased response time to evaluate a problematic job, task, tool or equipment; increased access to expert ergonomist evaluations; and the quality of the evaluation and recommendations. Although decreased injury rates and decreased limited duty/lost duty time could be attributed to the tele-ergonomics methodology, many other local Ergonomics Program features and initiatives contribute to this outcome. The specific and quantifiable contribution of the tele-ergonomics package to the reduction of these outcomes measures is difficult to impossible to identify with confidence. The true value of the final product is in the distribution of the tele-ergonomics methodology and tool package to all Army installations, facilities, depots and activities. Local Ergonomics Programs are frequently understaffed and lack the expert ergonomists' skills and knowledge. This package will dramatically increase local programs' access to the experts and enhance the local programs' functioning, responsiveness and quality as well as contribute to the overall program goal of reducing injuries and lost work time. The package will also be included in the next build of the Defense Occupational and Environmental Health Readiness System (DOEHRS) and in the Deployment Surveillance initiative. In addition, 91S and local technician training requirements and program will be submitted for inclusion in the School training, included in 91S continuing education initiatives and included in the Army 40-hour Applied Ergonomics Course. Finally, the package will be considered for DOD-wide distribution through the DOD Ergonomics Working Group.